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ABSTRACT

A total of 168 elementary school students with and without mild to moderately handicapping conditions participated in a study on the visual perceptions that pupils have of their schools. The study sought, in part, to determine whether mainstreamed students see their school differently than peers without handicaps. Subjects were asked to photograph aspects of their schools which they considered illustrative. A thematic categorization of the resulting 1,415 photographs was conducted and results were statistically analyzed. Very few statistically significant differences were found among the pictures of control, resource room, and special class groups. None of the statistically significant differences were considered as having practical significance. Results suggested that elementary school students, regardless of placement or possession of a mild to moderate handicapping condition, have similar visual perspectives of their school. The finding of so few significant differences was considered to be a potentially important finding in itself. (Author/RH)

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ELEMENTARY SCHOOL LEVEL STUDENTS' PERCEPTIONS OF THEIR SCHOOL WORLD

by

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ABSTRACT

One hundred sixty eight elementary school level students, with and without mild to moderately handicapping conditions, participated in a study on the visual perceptions that pupils have of their schools. The study sought, in part, to determine whether students with mild to moderate handicapping conditions who are academically mainstreamed for at least one period per day, see the school any differently from their schoolmates who do not require special educational services.

The pupils were asked to photograph that which they considered illustrative of their schools. A thematic categorization of the 1415 photographs taken by the youngsters was conducted and the results subjected to a statistical analysis. There were very few statistically significant differences among the pictures of the three groups (Control, Resource Room, and Special Class). None of the statistically significant differences were determined to have any practical significance.

A particularly interesting and potentially important finding was that there were so few differences among the pictures of the three groups. It appears that elementary level school students, regardless of placement or possession of a mild to moderate "invisible" handicapping condition, have similar visual perspectives of the school.

Public education institutions are affected directly by society's problems and concomitant search for corrective actions (Zaltman, Florio, & Sikorski, 1977). Sarason wrote in The Culture of Schools and the Problems of Change(1971):

> There are few, if any, major social problems for which explanations and solutions do not in some way involve the public school, involvement that may be direct or indirect, relevant or irrelevant, small or large. After all, the argument usually runs, the school is a reflection of our society as well as the principal vehicle by which its young are socialized or prepared for life in adult society (p. 7).

Over the past half century there has been a growing recognition in the United States of the diverse political, economic, ethnic, and social groups. This recognition was extended almost inevitably, given the open social system structure of schools, to the rights of children in general (Reynolds, 1980). The civil rights movement of the late 1950s, for example, questioned "separate but equal" school and class assignments for all students and later focussed attention on the disproportional assignments of minority children to special classes (Madden & Slavin, 1983).

Advocates for individuals with handicapping conditions joined in the battle against the "separate but equal" concept. Their advocacy resulted in the enactment of PL94-142, The

Education for all Handicapped Children Act of 1975. PL94-142 mandated that students with handicapping conditions be placed in the least restrictive alternative in which their educational needs could be met appropriately. A major intent of the law is the "greater inclusion of youngsters with handicapping conditions into the mainstream of social life" (Reynolds & Birch, 1977).

The word "mainstream" joined "desegregation" and "integration" as part of the educator's general vocabulary. Through the use of language, society showed its awareness of civil rights issues, although not general populace acceptance of, or belief in, the issues. Schools were desegregated, classes were integrated, and children were mainstreamed. The schools were being utilized, as Ravitch wrote in The Troubled Crusade (1983) to "...right the wrongs of history" (p. 114).

Implementation of PL94-142 caused great changes in the public schools' environments (Reynolds, 1980). Physical mainstreaming (the actual housing of pupils with handicapping conditions in public schools) and academic mainstreaming (the enrollment of students with handicapping conditions in non-special education classes) brought about many of these changes. Approximately 70% of all pupils with handicapping conditions are placed for at least a portion of their school day in mainstream education programs (Lakin & Reynolds, 1983).

The limited amount of research on the effects of mainstreaming on student perceptions of the school clearly

suggests the need to build a solid data base upon which valid and supportable theories can be established. Theories that are not tied to a wealth of facts about the subjects they purport to explain are not likely to be very useful. The most persistent difficulty in the study of student perceptions specifically and student behaviors in general is a lack of solid data, a limited body of facts and information.

Students play particular roles in the school setting. Many times, perceptions of the roles and the ways they are played relate directly to successful school experiences (Kedar-Vowadas, 1983; Lipson & Alden, 1983; Patter, 1983; Semmel & Cheney, 1979). Roles that are not played according to a standard script, behavior which does not conform to a standard pattern, impacts upon the school environment and role players' expectations.

Given this information, it would seem that study of students and their perceptions of the school environment should be priority research. Furthermore, knowing that a change in environment had to result from implementation of PL94-142, it would have made good sense to establish a broad empirical research base on students with handicapping conditions in order to facilitate effective and complete mainstreaming experiences. Unfortunately such a research base was not created.

Statement of Purpose

The purpose of this study is to ascertain whether elementary school level students with mild to moderate handicapping

conditions see the school differently from their schoolmates who are not in special education.

Research Questions

The research is a directed inquiry. It seeks answers to the following questions:

1. How do students with mild to moderate handicapping conditions see the school?

2. Do students with mild to moderate handicapping conditions who are physically and academically mainstreamed see the school any differently from their schoolmates who have not been identified as in need of special education?

Design of Study

The students involved in this quasi-experimental study were provided with instamatic cameras loaded with 12-exposure color film and were asked to photograph that which they considered illustrative of their schools. Researchers who have used cameras in a similar manner have suggested that such a technique provides information on how photographers see their own worlds (Bogdan & Biklen, 1982). The use of photography has been increasing steadily in sociology and is beginning to be utilized by educational researchers.

The information provided by the study of student photographers' photographs is selective by virtue of the research design and sample. The students themselves, however, selected the visual stimuli they deemed important given the assigned

photographic task. It is conceivable, then, that photographs taken by the students with and without handicapping conditions will provide us with valuable new information about the school world of all students.

Sample

Three groups of students who were in the third, fourth, or fifth grade, or who were age appropriate for placement in these grades, made up the sample. The total sample consisted of 168 youngsters from five school districts.

The Control group consisted of 70 third, fourth, and fifth graders who had not been identified as possessing handicapping conditions. None of these youngsters had ever been referred for, or involved in, special educational services including remedial education.

The second group, the Resource group, was comprised of 25 third, fourth, and fifth graders who had been identified as possessing handicapping conditions to the extent that supplementary special education was required. The supplementary special education supported the pupils' mainstream instruction and was provided in resource rooms. Each youngster received a minimum of three hours weekly in the resource room; no student spent more than 50% of her/his day in the resource room program.

Pupils with handicapping conditions who required primary special education in one or more areas and who were placed in self-contained special education classes made up the third group,

the Special Class group. Seventy-three students were in the Special Class group. Each Special Class pupil was academically mainstreamed for at least one period daily.

The pupils with handicapping conditions had to meet three criteria in order to be eligible for membership in the sample. They had to be age appropriate for placement in either the third, fourth, or fifth grade, be of at least average intelligence as determined by a standardized measure of intelligence, and possess "invisible" handicapping conditions. Students identified as "mentally retarded" and/or who possessed physical handicaps did not meet the criteria. They were not included in the sample.

The sample was chosen by the participating school districts' administrative staff after the researcher explained the research design and the sample's parameters to them. The sample was not randomly selected. It is a matter of interest, however, that the Resource and Special Class students participating in the study usually represented the entire eligible population of a target school.

A deliberate sampling for heterogeneity in research site selection was conducted in order to replace some of the external validity lost as a result of the nonrandom sample selection. In a deliberate sampling for heterogeneity, at least one instance of sampling should be representative of the typical, and at least one instance representing each of the extremes.

The five participating school districts are heterogeneous.

Two districts are fairly representative of the "typical" in terms of percentage of students identified as in need of special education, racial composition, and economic standing. The remaining three districts are representative of extremes in the size of the student population, percentage of youngsters identified as in need of special education, racial composition of the pupil population, and/or the percentage of students with handicapping conditions who have been placed in out-of-district special education settings.

Pilot

A kindergarten through grade twelve central school district wad used to pilot the study. Thirty third, fourth, and fifth grade students, or pupils who were age appropriate for placement in these grades, made up the pilot sample. The thirty pupils were divided into three groups: ten Resource students, ten Special Class students, and ten Control students.

Each student was provided with an instamatic camera loaded with color film. They were given the directions specified in the following section (Data Collection). The pupils were interviewed about the subjects of their photographs once the pictures were developed. The photographers' descriptions were subjected to a thematic categorization and the results used to develop a "School World" sorting form as well as a training program for judges who were involved in sorting the photographs/descriptions in the study proper.

Data Collection

The data were collected over a period of six weeks. Two days were spent in each research site. Day one was devoted to the photography sessions and day two was scheduled around student interviews. The interviews took place within 48 hours of the photography sessions.

The researcher met with small groups of students. The youngsters were given the following directions:

> Pretend you are writing to a penpal whom you have never met. In your letter, you decide that it would help to include a group of photographs of your school. That is what you will be doing today - taking the pictures you would send in your letter. Since I am not familiar with your school, when the pictures are developed I am going to come back to talk with you about what you have photographed. At that time, I will give you copies of your pictures to keep.

Each student received an instamatic camera for up to one hour of use. The youngsters were met with one-by-one and given individual instruction on how to use the camera. Some youngsters chose to leave the area as soon as they received their camera while others decided to wait for classmates. They were given access to all parts of the school.

The youngsters had eleven pictures to shoot. The cameras were loaded with 12-exposure color film and the first picture on

each roll was an identification shot of the photographer taken by the researcher.

Within 48 hours of each session, the researcher returned to the site with the developed pictures and interviewed the students about the subjects of their photographs. Individually, the pupils reviewed their photos with the researcher and answered the question, "What is this a picture of?" Their answers were recorded verbatim under the photographs which had previously been mounted on index cards. At the interviews' conclusions, students were given copies of their pictures to keep.

Data Analysis and Results

A total of 1415 photographs were developed in the five district study. Control youngsters shot 625 of the developed pictures, 191 were snapped by the Resource Room pupils, and 599 were taken by Special Class students. The 1415 pictures represent 77% of the total number of frames that were shot by the photographers. Twenty-three percent (433) of the negatives were not developed due to poor quality.

The overall average number of pictures developed for each student was 8.4. Specifically, the mean for Control youngsters was 8.9, for Special Class students the average was 8.2, and for the Resource Room pupils an average of 7.6 pictures were developed. The means of the three groups were not significantly different from one another at the .05 level of significance ($\chi^2(20)=20.60800$, $p < .4205$).

The basic distributional characteristics of each variable by photographer's placement in either the Control, Special Class, or Resource Room was determined by judges who sorted the pictures into four major categories: People, Places, Things, and Other. The categories were further divided into sub-categories. The variables are listed in Table One.

The completed picture sorting forms were coded and entered for distributional and cross-tabular analysis using the Statistical Package for the Social Sciences, second edition (1981). Chi-Square tests of statistical significance were conducted on each of the dependent variables, using placement as the independent variable. A .05 level of significance was selected as the determinant of statistical significance.

For the initial analysis, presented in Table Two, dependent variables were collapsed into the four major major categories. All of the variables suggesting a people focus, such as teacher or classmate, were collapsed into "People". Variables having to do with a place such as a classroom or a cafeteria were merged into "Places". The major category of "Things" covered, for example, decorations and school equipment. Variables that did not seem appropriate for inclusion in either "people", "Places", or "Things" fell into the category of "Other". The preliminary analysis of the four major categories found no statistical differences at the .05 level of significance.

Subsequent analysis of the individual dependent variables

TABLE 1

Listing of Variables

MAJOR CATEGORIES			
People	Places	Things	Other

SUB-CATEGORIES	
Adults, Instructional	Instructional
Adults, Non-Instructional	Non-Instructional
Children	
Class	

INDIVIDUAL VARIABLES		
Principal	CLASSROOM	Decoration
Service Staff	Own	Equipment
Office Staff	Special Area	Student Work
School Nurse	Special Education	Class Pet
Own Teacher	Mainstream	School Pet
Friend's Teacher	Teacher's	
Relative's Teacher	Friend's	
Special Area Teacher	Relative's	
Special Ed. Teacher	Gymnasium	
Child: Relative	Library	
Child: Schoolmate		
Child: Classmate	NON-INSTRUCTIONAL	
Child: Friend (In Class)	Cafeteria	
	Nurse's Office	
Child: Friend (In School)	Principal's Office	
	Pupil's Bathroom	
Class: Own MS	Playground	
Class: Own, Special Education	School Office	
	School Service Office	
Class: Teacher's		
Class: Friend's	School Exterior	
Class: Relative's	School Interior	
Class: Special Area Class		

TABLE 2

Distribution of Pictures by Major Category

Subject	Group			χ^2	df	p	eta^2
	Control $\bar{x}$	Special $\bar{x}$	Resource $\bar{x}$				
People	6.0	5.4	5.1	21.72487	18	.2444	.0171
Places	1.6	1.5	1.5	11.66855	14	.6329	.0002
Things	1.0	.8	0	10.38736	8	.2389	.0389
Other	.8	.5	0	5.12099	4	.2751	.0151

Note. $p < .05$

found significant ($p > .05$) differences in nine of seventy-four examinations. Two additional instances of statistically significant differences, for a total of eleven, were recorded when the test was conducted on variables in which several (at least four) variables had been collapsed. The results of this analysis are displayed in Table Three.

The reader should recognize that a relationship may be statistically significant without being substantially important. A general rule of thumb followed by social scientists is that at least 10% of the variance should be accounted for, or explained, for the "significant difference" to be considered meaningful or practical. Eta^2 provides a measure of the power of the difference: How much of the proportion of variance in the dependent variable is explained by the independent variable?

None of the "significant differences" found in the study had an eta^2 greater than .0886. Not one of the "significant differences" had the minimum of 10% of its variance accounted for or explained. The "significant differences", therefore, are not considered to be practical or meaningful.

The finding of the work that no significant differences were found as a result of the Chi-Square tests conducted on the four major variables representing the major categories should be recognized. Equally worthy of recognition is the finding that no statistically significant difference resulting from the individual variable analysis was determined to have practical or

TABLE 3

Summary of Statistically Significant Differences

Subject	Group: Control $\bar{x}$	Special $\bar{x}$	Resource $\bar{x}$	χ^2	df	p	eta^2
Principal, Named	2.5	3.3	.4	10.86920	4	.0281*	.05939
Service Staff, Named	.8	3.0	.8	12.45443	4	.0143*	.05313
Teacher, Spec. Education	1.1	4.5	1.6	16.09118	6	.0133*	.08341
Teacher, Named	10.3	4.9	4.0	19.95218	10	.0297*	.08867
Teacher, Unnamed	.9	1.5	4.4	17.79850	8	.0228*	.06574
Relative, Named	0	0	1.2	11.57730	4	.0208*	.06195
Spec. Ed. Class	.1	.4	2.0	10.98251	4	.0268*	.05235
Library	.6	.8	4.0	12.83911	6	.0457*	.06571
Nurse's Office	.1	1.0	0	6.71568	2	.0348*	.03999
Adults, Non-Instruct.	7.8	10.4	3.6	15.60131	8	.0485*	.04839
Places, Instruct.	5.0	5.4	8.8	16.28673	8	.0385*	.03252

* $p < .05$

meaningful significance. The three groups of students were more alike than different in the ways in which they identified their photographs.

Findings and Conclusions

Research Question One: How do students with mild to moderate handicapping conditions see the school?

The findings of this study evidence that elementary school level students with mild to moderate handicapping conditions see their school in much the same way as do all other similarly aged youngsters. The school appeared to them as a world made up of people. The people who were given the most photographic attention and, thus, seemingly the most important, were adults. Predominant among the adult subjects were teachers.

Special Class youngsters, not surprisingly, paid a fair amount of attention to special education teachers. They, however, paid little attention to the teachers identified as "Own Mainstream Teacher". The word "mainstream is in the vocabulary of Special Class youngsters yet it was not used to describe many of their subjects. Special Call students, perhaps, do not give much recognition to the academic component of their educational program when that component consists of academic mainstreaming into a grade level class for reading, writing, arithmetic, science, or social studies. Special Class students did pay attention to the academic mainstreaming component of their program when it consisted of placement in a special area (art, music, gym, library, or computer) class.

An interesting trend was noted during the analysis of the specific subjects of the photographers' descriptions. Special Class pupils had a special education focus to some of their pictures. The focus of the Control pupils' photographs was the "regular" school. The students' perspectives of their school world were shaped by their primary placement.

Resource Room youngsters, however, had a split-focus which is illustrative of their situation: Resource Room children are, as the expression goes, neither fish nor fowl. They do not possess handicapping conditions to the extent that placement in a self-contained special education class is warranted, yet some daily special education is needed in order for them to be successful in the mainstream program. An unexpected finding of this work, and one which requires additional research, is the apparent perspective of the school held by Resource Room students. The special educational resource room services, though not primary, seemingly have influenced Resource Room students' perceptions of their schools. Research is need to prove this trend as well as to determine the extent of influence that the special education services provided in resource rooms has in shaping students' views of the school.

Research Question Two: Do students with mild to moderate handicapping conditions who are physically and academically mainstreamed see the school world differently from their schoolmates who have not been identified as possessing handicapping conditions?

In general, all of the students participating in the study

photographed similar subjects. They saw the school in much the same way.

Two important trends warranting further study were noted. The first is though the students see the school in a similar way, their primary placements directed the photographs' foci. The youngsters' placements shaped their perspectives.

The second trend, though not of statistical significance and noted with far less frequency than the placement-perspective situation, was that students with mild to moderate handicapping conditions tended to photograph places where adults directed activities and/or imposed a certain external structure upon the activities taking place. Special Class youngsters did not pay much photographic attention to either the playground or the school exterior. Resource Room pupils did not identify any of their pictures as being of the playground. The playground and school exterior, however, were popular subjects for the Control group.

Implications for Research

A major finding of this study was that elementary school level pupils, regardless of placement or possession of a mild to moderate "invisible" handicapping condition, saw the school world in a similar way.

The pupils all seemed to feel a part of the school. The pictures' descriptions did not suggest a sense of exclusion or a feeling that the photographer considered

herself/himself an outsider. This is a particularly exciting finding as it indicates that elementary school level students with handicapping conditions have been physically integrated, not just physically placed, into the school.

Currently enrolled elementary school level students began their education subsequent to the enactment of PL94-142. Special education and physical mainstreaming have always been a part of their school world. This research suggests that elementary school level students with "invisible" handicapping conditions have been truly physically integrated into the school. A reason for this occurrence may be that physical mainstreaming has always been a part of the students' school experiences.

Currently enrolled secondary school level pupils, on the other hand, may have started school prior to either the enactment of PL94-142 or the implementation of its regulations. Their school world did not always include special education and physical mainstreaming. It would be interesting to conduct an inquiry into the school world of secondary school level students, both pupils with handicapping conditions and without, to determine whether physical integration of students with handicapping conditions has occurred on the junior and senior high school level.

The finding that elementary school level students with mild to moderate handicapping conditions see the school in

much the same way as do pupils who have not been involved in special education provides support for those individuals who argue against stereotyping youngsters who require special educational services as socially "different". Elementary school students apparently consider similar components of the school important. Adults, for example, are given a great deal of attention by all the elementary school students who were involved in this study.

Elementary school level students do not appear to consider their peers as the most important component of the schools. Silverman and Zigmond (1983) noted that, unlike elementary school students for whom school and home define the boundaries of their lives, adolescents have begun to expand their boundaries. Peer relationships take on particular significance (p. 481). A suggestion for future research would be to investigate, using the research design described in this work, the importance peer groups have for secondary school level adolescent students. This study could be coupled with an inquiry asking whether physical integration has occurred in secondary schools.

The suggestion of this research that two parallel sub-cultures, a special education and a mainstream sub-culture, exist within the overall culture of the school warrants further investigation. The investigation should take place at all levels of the school, primary through high school.

The parallel sub-culture finding leads to the question, are there any <u>other</u> sub-cultures present in the overall school culture and, if so, how do they impact upon peer interaction and student - teacher interaction. It would be worthwhile to discover if membership in a particular sub-culture is related to academic achievement as well as what elements of that sub-culture influences academic success. An understanding of the school, student motivation and achievement, effective instructional techniques, and the influences of schooling on students, will not occur unless there is an accurate sense of the makeup, perceptual as well as physical, of the general student population.

Damico (1982) contends that there is a Black sub-culture and a White sub-culture present in the school's boundaries. The Damico contention was supported by the results of a research design which employed student photographers. The research design implemented in this current piece of work on elementary school-aged students is an adaptation of Damico's design. Findings of this research indicate the presence of a mainstream sub-culture and a special education sub-culture. It is reasonable, then, to suggest that further application of the research design may result in, for example, the identifications of gender, vocational or academic orientation, and grade level placements reflective of still other sub-cultures.

Implications for Practice

According to the findings of this research, elementary school level students see the school as a world of people. The people they paid most photographic attention to were adults. Adults who are teachers were the most popular of subjects. This finding supports Arnold's (1984) conclusion which states that adults have a great deal of influence over students and, as such, can influence student motivation and affect behavior.

Also supporting Arnold's conclusions as well as giving credence to this work's findings is the recent research conducted by Samuels and Miller (1985) who studied the attention to task differences between pupils with learning disabilities and students who have not been identified as in need of special education. Samuels and Miller, after conducting their investigation in both classroom and laboratory settings, concluded that there were no attention to task differences between the two groups of pupils. The only significant difference found was that attention to task was increased when pupils were in small groups of nine or less students rather than in a large class, and when the youngsters were involved in teacher-directed activities rather than independent activities. The students, as a whole, were more alike than they were different.

Analysis of the "Places" pictures suggests that

students with mild to moderate handicapping conditions are not as independent as students who have not received special education services. This suggestion raises a concern regarding the development of independence and the ability to handle non-structured activities and choice. Attention needs to be paid to these areas: the importance of independence and making choices should not be underestimated.

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